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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,488	08/20/2003	Peter Greenwood	ANO6272/3554	7401

7590 02/08/2005

Michelle J. Burke
Akzo Nobel Inc. - Intellectual Property Dept.
7 Livingstone Avenue
Dobbs Ferry, NY 10522

EXAMINER

MITCHELL, KATHERINE W

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding..

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Office Action Summary

Application No.

10/644,488

Applicant(s)

GREENWOOD

Examiner

Katherine W. Mitchell

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,5,7,9,11,13 and 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,8,10,12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on NONE is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Claims 1,4,6,8,10,12, and 14 in the reply filed on 11/18/2004 is acknowledged. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the particle size distribution" in line 2. There is insufficient antecedent basis for this limitation in the claim. Also, it is unclear exactly what "lower than about 15% by numbers" means.

Claim Rejections - 35 USC § 102

Art Unit: 3677

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1,6, 8, 10, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Crinkelmeyer USP 4102400.

Re claims 1 and 14: Crinkelmeyer teaches a method of sealing a leaking cavity comprising injecting into said cavity (col 2 lines 5-13) a grouting composition comprising an alkali metal silicate or organic silicate, colloidal silica particles, and at least one gelling agent (col 3 lines 27-52, note that Iler's teachings are incorporated by reference, and calcium chloride is an alkaline metal salt), wherein the composition has a weight ratio of silica to silicate of from about 2:1 to about 100:1 (col 7 lines 14-20 and col 6 lines 5-32)

Further Re claim 6: A hydraulic binder is taught in col 4 line 48 – col 5 line 27).

Further Re claims 8 and 10: A ratio of silica to silicate of from about 3:1 to 70:1 and about 6:1 to about 20:1 is taught in col 7 lines 14-20 and col 6 lines 5-32.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3677

8. Claims 1, 4, 8, 10, 12, and 14 are rejected under 35 U.S.C. 102(b) as anticipated by Bartlett et al USP 5370478, hereafter called Bartlett or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bartlett.

Re claims 1, 4, 8, 10, and 14: Bartlett teaches a method of sealing a leaking cavity in col 5 lines 5-65, col 7 lines 36-52 and col 8 lines 63-68, comprising injecting into said cavity an alkali metal silicate or organic silicate (abstract), colloidal silica (silica sol, abstract) and at least one gelling agent (NaCl, which is an alkali metal salt). Examples 1 and 2 have the colloidal silica sol reacting with NaCl, thus inherently an alkali metal (sodium) silicate will be formed at a ratio of silica to silicate of from about 2:1 to 100:1, including 3:1 to 70:1 and 6:10 to 20:1. Col 2 lines 28-44 teach the composition as a sealing composition. Col 5 lines 20-31 teach that the colloidal silica was non-aggregated, thus inherently the S-value was between about 30 and 90. Non-aggregated inherently teaches an S value of between 30 and 90, as applicant has defined S-value as characterizing the extent of aggregation of the silica particles in silica sol on page 4, lines 7-8.

While examiner believes non-aggregated inherently teaches an S value between 30 and 90, if it is held that this is not inherent, it would have been obvious to one of ordinary skill in the art, having the teachings of Bartlett before him/her at the time the invention was made, to modify Bartlett to use a sol with an high S value of between 30 and 90 in order to ensure non-aggregated sols, as applicant has noted in admitted prior art that Iler and Dalton correlate a high S value with low aggregation, and developed the S value specifically to characterize the extent of aggregation. One would have been

Art Unit: 3677

motivated to make such a combination because non-aggregated sols would have been obtained, as taught/suggested by Bartlett, and non-aggregated sols are more fully dispersed and thus inherently able to more uniformly permeate and uniformly seal than a sol with aggregated {larger} particles, and faster gelling time and higher gel rates would be obtained as discussed by Bartlett in col 5 lines 28-65. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used such a range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233, and a non-agglomerated sol, without specifying a specific S-value, would obviously rule out values near zero.

Re claim 12: A relative standard deviation of silica particle size lower than about 15% by numbers is taught in col 5 lines 20-27 and col 10 lines 13-24.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 703-305-6713. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

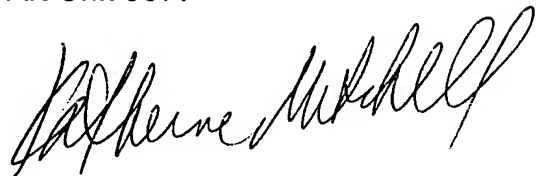
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3677

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell
Examiner
Art Unit 3677

Kwm
2/5/2005

A handwritten signature in black ink, appearing to read "Katherine W Mitchell", written in a cursive style.